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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,429	02/10/2004	Nusrallah Jubran	3216.60US02	9734
24113	7590	12/14/2005	EXAMINER	
PATTERSON, THUENTE, SKAAR & CHRISTENSEN, P.A. 4800 IDS CENTER 80 SOUTH 8TH STREET MINNEAPOLIS, MN 55402-2100			DOTE, JANIS L	
			ART UNIT	PAPER NUMBER
			1756	

DATE MAILED: 12/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/775,429

Applicant(s)

JUBRAN ET AL.

Examiner

Janis L. Dote

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 21-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 21-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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1. The examiner acknowledges the cancellation of claims 15-20 and the amendments to claims 1, 8, 21, and 25 set forth in the amendment filed on Jun. 17, 2005. Claims 1-14 and 21-27 are pending.

The "Amendment to the specification" section and the replacement abstract filed on Sep. 30, 2005, have been entered.

2. The "Amendment to the specification" and the replacement abstract filed on Jun. 17, 2005, did not comply with 37 CFR 1.121 for the reasons discussed in the "Notice of non-compliant amendment" mailed on Aug. 30, 2005. Accordingly, that "Amendment to the specification" section and the replacement abstract were not entered.

3. Applicants' election without traverse of the invention of Group I, claims 1-14 and 21-27, in the reply filed on Jun. 17, 2005, is acknowledged.

4. The objection to the abstract set forth in the office action mailed on Mar. 22, 2005, paragraph 6, has been withdrawn in response to the replacement abstract filed on Sep. 30, 2005.

The objections to the specification set forth in the office action mailed on Mar. 22, 2005, paragraph 8, have been withdrawn

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in response to the amended paragraph beginning at page 21, line 12, of the specification, set forth in the amendment filed on Sep. 30, 2005, and in response to applicants' comments filed on Jun. 17, 2005, page 11, lines 17-21.

The terminal disclaimer filed on Jun. 17, 2005, disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US Application 10/670,943, which issued as US Patent No. 6,955,869, has been reviewed and is accepted. The terminal disclaimer has been recorded.

Accordingly, the rejections under the judicially created doctrine of obviousness-type double patenting of claims 1-3, 5, 8-10, 12, 14, 21-23, and 25-27 over claims 1-30 of copending Application No. 10/670,943 (Application'943) and of claim 7 over claims 1-30 of copending Application'943 in view of Diamond, Handbook of Imaging Materials, pp. 395-396, set forth in the office action mailed on Mar. 22, 2005, paragraphs 21 and 22, respectively, have been withdrawn.

5. Applicants' claim for domestic priority under 35 U.S.C. 119(e) is acknowledged. However, the provisional application upon which priority is claimed fails to provide adequate support under 35 U.S.C. 112 for claims 1-14 and 21-27

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of this application. Provisional Application 60/466,813 (Application'813) does not provide an adequate written description for subject matter recited in the instant claims for the reasons discussed in the office action mailed on Mar. 22, 2005, paragraph 5, which are incorporated herein by reference. Accordingly, the subject matter recited in instant claims 1-14 and 21-27 is accorded benefit only of the filing date, Feb. 10, 2004, of the instant application.

6. The disclosure is objected to because of the following informalities:

(1) The specification discloses that the solubilizing substituent comprises a  $-(CH_2)_nH$  group where  $n$  is an integer between 1 and 50 and one or more of the methylene groups can be replaced by N, C, B, Si, P, or a " $CR_b$ ." See the specification, page 3, lines 9-11, page 8, lines 20-24, and page 21, line 1-4. However, it is not clear how a methylene group, which is divalent, can be replaced with groups that are not divalent.

(2) The specification further discloses that the solubilizing substituent comprises a  $-(CH_2)_nH$  group where  $n$  is an integer between 1 and 50, one or more of the methylene groups can be replaced by a  $NR_a$  group, a " $CR_b$ " group, a  $CR_cR_d$  group, or a  $SiR_eR_f$  group where the R groups can be a bond. See the

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specification, page 3, lines 11-12, page 8, lines 24-25, and page 21, lines 3-4. However, it is not clear to what the R groups in the groups are bonded.

(3) The specification also discloses that the solubilizing substituent comprises a  $-(CH_2)_nH$  group where  $n$  is an integer between 1 and 50, one or more of the methylene groups can be replaced by a  $NR_a$  group, a " $CR_b$ " group, a  $CR_cR_d$  group, or a  $SiR_eR_f$  group where the R groups can be part of a ring group. See the specification, page 3, lines 11-14, page 8, lines 24-27, and page 21, lines 3-6. However, it is not clear what is meant by the term "part of a ring group." The specification does not define said group.

(4) The use of trademarks, e.g., Tedlar [sic: TEDLAR] in the amended paragraph beginning at page 12, line 3, of the specification, set forth in the amendment filed on Sep. 30, 2005, has been noted in this application. The trademarks should be capitalized wherever they appear and be accompanied by the generic terminology. This example is not exhaustive. Applicants should review the entire specification for compliance.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any

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manner which might adversely affect their validity as trademarks.

Appropriate correction is required.

Applicants' arguments filed on Jun. 17, 2005, regarding the objections in items (1), (3), and (4) above have been fully considered but they are not persuasive.

(1) Applicants assert that "one of ordinary skill in the art would recognize that the substituted group would be inserted in the methylene chain in such a way as to provide the appropriate number of bonds to each group. Thus, as long as the group is at least double valent, the remaining portions of the group can be appropriately substituted based on the liberal substitution defined in the specification . . . two adjacent methylene groups are replaced by two CR<sub>2</sub> group[s] to form an alkenyl solubilizing substituent."

Applicants' assertion is merely attorney argument that is not supported by any objective evidence on the present record. The instant specification merely discloses that one of the methylene groups in the group  $-(CH_2)_nH$  can be replaced by N, C, B, Si, P, or a "CR<sub>b</sub>". Given the plain language of the objected disclosure in the instant specification, a person having ordinary skill in the art would conclude that the disclosure of the replacement of the divalent methylene group with N, C, B,

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Si, P, or a "CR<sub>b</sub>" was in error. A person having ordinary skill in the art would not have known what is meant by the disclosure of replacing a -CH<sub>2</sub>- with the non-divalent groups N, C, B, Si, P, or a "CR<sub>b</sub>". Applicants are "required to make clear and precise the terms that are used to define the invention whereby the metes and bounds of the claimed invention can be ascertained." MPEP 2173.05(a)I (8<sup>th</sup> edition, Rev. 3, Aug. 2005).

(3) Applicants assert that "one of ordinary skill in the art would understand that the term 'part of a ring group' refers to an atom or group that is bonded to other atoms or groups in a ring system."

Applicants' assertion is merely attorney argument that is not supported by any objective evidence on the present record. "The meaning of every term used in a claim should be apparent from the prior art or from the specification . . . at the time the application is filed. Applicants need not confine themselves to the terminology used in the prior art, but are required to make clear and precise the terms that are used to define the invention whereby the metes and bounds of the claimed invention can be ascertained." MPEP 2173.05(a)I (8<sup>th</sup> edition, Rev. 3, Aug. 2005). The instant specification does not define the term "part of a ring group." Nor does the instant



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specification provide any examples of the term. Accordingly, the objection stands.

(4) Applicants assert that the amendment to the specification filed on Sep. 30, 2005, overcomes the objection. However, for the reasons discussed in the objection in item (4) above, the amendment did not capitalize all of the trademarks disclosed in the instant specification. Accordingly, the objection stands.

The examiner notes that applicants' response filed on Jun. 17, 2005, did not address the objection set forth in item (2) above.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-14 and 21-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Instant claims 1, 8, 21, and 25 are indefinite in the phrase " $R_a$ ,  $R_b$ ,  $R_c$ ,  $R_d$ ,  $R_e$ , and  $R_f$ , are, each independently . . . part of a ring group" because it is not clear what is meant by the term "part of a ring group." The instant specification does not define said group.

Instant claims 1, 8, and 21 are further indefinite in the phrase "the solubilizing substituent comprises a  $-(CH_2)_nH$  group where  $n$  is an integer between 1 and 50, and one or more of the methylene groups is optionally replaced by a . . . C, B, Si, P, . . . a  $CR_b$  . . ." because it is not clear how a methylene group, which is divalent, can be replaced with groups that are not divalent.

Instant claims 1, 8, and 21 are also indefinite in the phrase "solubilizing substituent comprises a  $-(CH_2)_nH$  where  $n$  is an integer between 1 and 50, and one or more of the methylene groups is optionally replaced by . . . a  $CR_b$  group, a  $CR_cR_d$  group, or a  $SiR_eR_f$  group" where the R groups can be "a bond" because it is not clear to what the R groups in the groups are bonded.

Instant claim 25 is further indefinite in the phrase " $R_7$  comprises a  $-(CH_2)_nH$  group where  $n$  is an integer between 1 and 50, and one or more of the methylene groups is optionally replaced by a . . . C, B, Si, P, . . . a  $CR_b$  . . ." because it is

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not clear how a methylene group, which is divalent, can be replaced with groups that are not divalent.

Instant claim 25 is also indefinite in the phrase " $R_7$  comprises a  $-(CH_2)_nH$  where  $n$  is an integer between 1 and 50, and one or more of the methylene groups is optionally replaced by . . . a  $CR_b$  group, a  $CR_cR_d$  group, or a  $SiR_eR_f$  group" where the  $R$  groups can be "a bond" because it is not clear to what the  $R$  groups in the groups are bonded.

Applicants' arguments filed on Jun. 17, 2005, have been fully considered but they are not persuasive for the reasons discussed in paragraph 6, items (1) and (3) above. The examiner notes that applicants' response filed on Jun. 17, 2005, did not address the rejection with respect to the term "a bond" recited in instant claims 1, 8, 21, and 25.

9. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

10. Claims 1, 2, 21, 22, 25, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,415,640 (Goto).

Goto discloses an electrophotographic organic photoreceptor comprising an electrically conductive substrate and a light-sensitive layer comprising a charge generating material and a

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charge transport material represented by formula (I) disclosed at col. 3, lines 20-42. Col. 3, lines 13-47; col. 7, lines 23-33; and col. 8, line 53, to col. 9, line 3.

Goto teaches that the charge transport material of formula (I) can be represented by compound (11) at col. 5. Compound (11) meets the limitations of the formula recited in instant claims 1, 2, 21, 22, 25, and 27, except for the 9-fluorenylidene group comprising a substituent as recited in the instant claims. The Goto compound (11) comprises a 9-fluorenylidene group substituted with dimethylamino. The underlined hydrogen attached to the carbon in the group  $-\text{CH}=\text{N}-\text{N}=\text{}$  in the Goto compound (11) meets the group R of the formula recited in the instant claims. The N,N-diethylamine-4-naphthylene group in the Goto compound (11) meets the p-(N,N-disubstituted) arylamine group recited in instant claims 2, 22, and 27.

As discussed supra, the substituent group  $-\text{N}-(\text{CH}_3)_2$  on one of the phenyl groups of the 9-fluorenylidene group in the Goto compound (11) does not meet the substituent limitations recited in instant claims 1, 21, and 26.

However, Goto discloses that compound (11) represents formula (I) disclosed at col. 3, lines 20-47. Goto teaches that both benzene rings in the 9-fluorenylidene group are substituted

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with the groups X and Y, respectively, where the X and Y groups can be a substituted an amino, a halogen, an alkyl group having preferably from 1 to 8 carbon atoms, an amino group, or an alkoxy group having preferably 1 to 8 carbon atoms. Col. 3, lines 43-47, and compounds (9), (10), and (12) at col. 5. The Goto compound (11) meets the substituted 9-fluorenylidene limitation recited in instant claims when the dimethylamino substituent group on the benzene ring in the 9-fluorenylidene group in compound (11) is replaced with an alkyl group having 1 to 8 carbon atoms or an alkoxy group having 1 to 8 carbon atoms as taught by Goto. The alkyl group having 1 to 8 carbon atoms meets the substituent group  $-(CH_2)_nH$ , when n is an integer of 1 to 8 recited in the instant claims. The alkoxy group having 1 to 8 carbon atoms, such as  $-OCH_3$ , meets the substituent group  $-(CH_2)_nH$ , when n is 2-9, and the first methylene group is replaced with the group  $-O-$ .

According to Goto, the charge transport compound of formula (I) disclosed at col. 3, lines 20-47 has excellent compatibility with binder resins and carrier transportability and is stable against heat and light. Col. 2, lines 49-55. Goto further discloses that an organic photoreceptor comprising said charge transport compound has higher sensitivity, less residual potential, and excellent durability, i.e., maintains

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stable electrophotographic characteristics over an extensive period of time. Col. 2, line 62, to col. 3, line 5.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of Goto, to replace the dimethylamino substituent group on the benzene ring in the 9-fluorenylidene group in the Goto compound (11) with an alkyl having 1 to 8 carbon atoms or an alkoxy having 1 to 8 carbon atoms substituent group, which are taught by Goto to be equivalent substituent groups to dimethylamino, such that the resultant charge transport compound is within the compositional limitations of the formula recited in instant claims. It would have also been obvious for that person to use the resultant compound as the charge transport material in the organophotoreceptor disclosed by Goto. That person would have had a reasonable expectation of successfully obtaining a charge transporting material and an organic photoreceptor having the benefits disclosed by Goto.

11. Claims 7-9 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,430,526 (Ohkubo) combined with Goto.

Ohkubo discloses an electrophotographic image forming apparatus comprising all the components recited in instant

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claims 8, 9, and 14, but for the particular photoreceptor. Fig. 1 and col. 2, line 56, to col. 3, line 56. The apparatus shown in Fig. 1 comprises an electrophotographic photosensitive drum **3**, contact charging member **4**, an exposure unit that comprises a laser beam **L**, and a developing unit **5** that comprises a toner. The photosensitive drum meets the drum limitation recited in instant claim 7.

Ohkubo does not disclose the use of the photoreceptor recited in the instant claims. However, Ohkubo does not limit the type of photoreceptor used. See reference claim 1.

Goto renders obvious an electrophotographic organic photoreceptor comprising a photosensitive layer as described in paragraph 10 above, which is incorporated herein by reference. As discussed in paragraph 10 above, Goto teaches that an organic photoreceptor comprising the Goto charge transport compound has higher sensitivity, less residual potential, and excellent durability, i.e., maintains stable electrophotographic characteristics over an extensive period of time. Col. 2, line 62, to col. 3, line 5.

It would have been obvious for a person having ordinary skill in the art to use the photosensitive layer rendered obvious over the teachings of Goto as the photosensitive layer on the conductive drum in the apparatus disclosed by Ohkubo.

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That person would have had a reasonable expectation of successfully obtaining an electrophotographic apparatus that has higher sensitivity, less residual potential, and excellent durability over an extensive period of time.

12. Claims 4 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goto as applied to claims 1 and 21 above, further combined with additional teachings in Goto.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohkubo combined with Goto as applied to claim 8 above, further combined with additional teachings in Goto.

Goto renders obvious an electrophotographic organic photoreceptor and a charge transport material as described in paragraph 10 above, which is incorporated herein by reference.

Ohkubo combined with Goto renders obvious an electrophotographic imaging apparatus as described in paragraph 11 above, which is incorporated herein by reference.

The Goto charge transport compound rendered obvious over the teachings of Goto described in paragraphs 10 and 11 above meets the compositional limitations of the formula recited in instant claims 4, 11, and 24, except for the 9-fluorenylidene



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group comprising a substituent as recited in instant claims 4, 11, and 24.

However, as discussed in paragraphs 10 and 11 above, Goto discloses that compound (11) represents formula (I) disclosed at col. 3, lines 20-47. Goto teaches that both benzene rings in the 9-fluorenylidene group are substituted with the groups X and Y, respectively, where the X and Y groups can be a substituted amino, a halogen, an alkyl group, an amino group, or an alkoxy group. Col. 3, lines 43-47, and compounds (10) and (12) at col. 5. The Goto compound (11) meets the substituted 9-fluorenylidene limitation recited in instant claims 4, 11, and 24, when the dimethylamino substituent group on the benzene ring in the 9-fluorenylidene group in the Goto compound (11) is replaced with an equivalent substituent group, such as an alkyl having 1 to 8 carbon atoms or an alkoxy having 1 to 8 carbon atoms, as taught by Goto, and the non-substituted benzene ring in the 9-fluorenylidene group in compound (11) is substituted with a halogen, such as chlorine or bromide as shown in compounds (10) and (12), or an alkyl group, a substituted or unsubstituted amino group, a hydroxyl group, or an alkoxy group, as taught by Goto.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of Goto, to

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substitute the benzene ring in the 9-fluorenylidene group that is not substituted with the substituted dimethylamino group in compound (11) with a halogen, an alkyl, an alkoxy, or a substituted or unsubstituted amino group, a hydroxyl group, or an alkoxy group as taught by Goto, and further to replace the dimethylamino substituent group on the benzene ring in the 9-fluorenylidene group in compound (11) with an alkyl having 1 to 8 carbon atoms or an alkoxy having 1 to 8 carbon atoms substituent group, which are taught by Goto to be equivalent substituent groups to dimethylamino, such that the resultant charge transport compound is within the compositional limitations of the formula recited in the instant claims 4, 11, and 24. It would have also been obvious for that person to use the resultant compound as the charge transport material in the organophotoreceptor disclosed by Goto and in the imaging apparatus rendered obvious over the combined teachings of Ohkubo and Goto. That person would have had a reasonable expectation of successfully obtaining a charge transporting material, an organic photoreceptor, and an electrophotographic imaging apparatus having the benefits disclosed by Goto.

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13. Claims 1, 2, 5, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,528,645 B1 (Hamasaki) combined with Goto.

Hamasaki discloses a single-layered organic photoreceptor comprising an electrically conductive substrate and a photosensitive layer comprising particular titanyl phthalocyanine crystals, an electron transferring compound, and a hole transferring compound. Col. 3, lines 54-57; and, for example, example 1 at col. 23, line 65, to col. 24, line 17. The electron transferring compound meets the electron transporting compound recited in instant claim 6. According to Hamasaki, the single-layered organic photoreceptor has good sensitivity characteristics "that are always stable regardless of the lapsed time after preparing the coating solution" comprising said titanyl phthalocyanine crystals. Col. 3, lines 64-67, and Table 2, example 1.

Hamasaki does not exemplify a single-layered organic photoreceptor comprising the charge transport compound recited in the instant claims. However, Hamasaki discloses that as the hole, i.e., charge, transferring material, "there can be used any of various hole transferring compounds which have conventionally been known," such as hydrazones. Col. 13, lines 11-13; and col. 14, line 3.

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Goto renders obvious a hydrazone, i.e., an azine, charge transport compound that meets the compositional limitations of the formula recited in instant claims 1 and 2. The discussion of the Goto compound in paragraph 10 above is incorporated herein by reference. According to Goto, the Goto charge transport compound has excellent compatibility with binder resins and carrier transportability and is stable against heat and light. Col. 2, lines 49-55. Goto also teaches that an organic photoreceptor, such as a single-layered photoreceptor, comprising said charge transport compound has higher sensitivity, less residual potential, and excellent durability, i.e., maintains stable electrophotographic characteristics over an extensive period of time. Col. 2, line 62, to col. 3, line 5; col. 7, lines 39-45; and Figs. 5 and 6.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of Goto, to use the charge transport compound rendered obvious over the teachings of Goto as the hole transferring compound in the single-layered organic photoreceptor disclosed by Hamasaki. That person would have had a reasonable expectation of successfully obtaining a single-layered electrophotographic organic photoreceptor having higher sensitivity, less residual potential, and excellent durability, as disclosed by Goto.

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14. Claims 7-9 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohkubo combined with Hamasaki and Goto.

Ohkubo discloses an electrophotographic image forming apparatus comprising all the components recited in instant claims 8, 9, and 12-14, but for the particular photoreceptor. The discussion of Ohkubo in paragraph 11 above is incorporated herein by reference.

Ohkubo does not disclose the use of the photoreceptor recited in the instant claims. However, Ohkubo does not limit the type of photoreceptor used. See reference claim 1.

Hamasaki combined with the teachings of Goto renders obvious a single-layered organic photoreceptor comprising a photosensitive layer as described in paragraph 13 above, which is incorporated herein by reference. The photoreceptor meets the compositional limitations recited in instant claims 7-9 and 12-14.

It would have been obvious for a person having ordinary skill in the art to use the photosensitive layer rendered obvious over the combined teachings of Hamasaki and Goto as the photosensitive layer on the conductive drum in the apparatus disclosed by Ohkubo. That person would have had a reasonable expectation of successfully obtaining an electrophotographic

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apparatus having the benefits disclosed by both Hamasaki and Goto, i.e., good sensitivity characteristics, less residual potential, and excellent durability.

15. Applicants' arguments filed on Jun. 17, 2005, with respect to the rejection over Goto in paragraphs 10-14 above have been fully considered but they are not persuasive.

Applicants assert that the Goto charge transport compound (11) does not meet the charge transport compound recited in the instant claims, where the 9-fluorenylidene group is substituted with a solubilizing substituent comprising a  $-(CH_2)_nH$  group where  $n$  is an integer between 1 and 50 as recited in the instant claims.

However, for the reasons discussed in paragraph 10 above, Goto renders obvious a charge transport compound that meets the charge transport compound limitations recited in the instant claims. As discussed in paragraph 10 above, Goto teaches that the dimethylamino substituent on one of the phenyl rings of the 9-fluorenylidene group in the Goto compound (11) can equally be an alkyl group having preferably from 1 to 8 carbon atoms or an alkoxy group having preferably 1 to 8 carbon atoms. The alkyl group having 1 to 8 carbon atoms meets the substituent group  $-(CH_2)_nH$ , when  $n$  is an integer of 1 to 8 recited in the instant

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claims. The alkoxy group having 1 to 8 carbon atoms, such as  $-OCH_3$ , meets the substituent group  $-(CH_2)_nH$ , when  $n$  is 2-9, and the first methylene group is replaced with the group  $-O-$ . The Goto compound (11) meets the substituted 9-fluorenylidene limitation recited in instant claims when the dimethylamino substituent group on the 9-fluorenylidene group is replaced with an alkyl group having 1 to 8 carbon atoms or an alkoxy group having 1 to 8 carbon atoms as taught by Goto.

Accordingly, the rejections set forth in paragraphs 10-14 over Goto stand.

16. Claims 3, 10, 23, and 26 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The prior art of record, namely Goto, does not teach or suggest a charge transport compound as recited in instant claims 3, 10, 23, and 26, where the 9-fluorenylidene group is substituted with a substituent comprising a  $-C(=O)-O-R_5$  where  $R_5$  is an alkyl group, an alkenyl group, or an aromatic group.

17. Applicants' amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS**

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**ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicants are reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janis L. Dote whose telephone number is (571) 272-1382. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Mark Huff, can be reached on (571) 272-1385. The central fax phone number is (571) 273-8300.

Any inquiry regarding papers not received regarding this communication or earlier communications should be directed to Supervisory Application Examiner Ms. Claudia Sullivan, whose telephone number is (571) 272-1052.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JLD  
Dec. 9, 2005

*Janis L. Dote*  
JANIS L. DOTE  
PRIMARY EXAMINER  
GROUP-1539  
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